

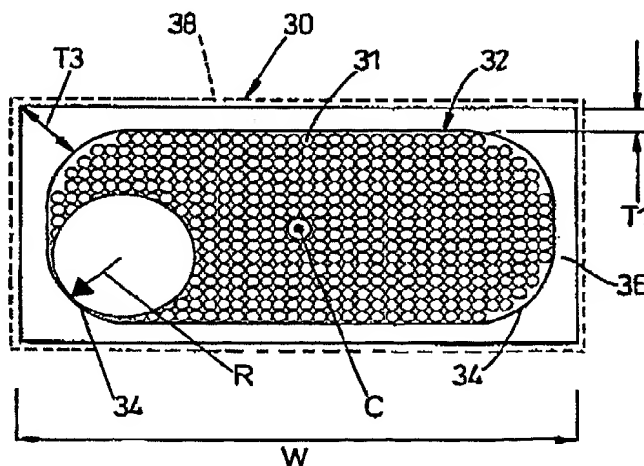
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(5) International Patent Classification ⁷ : H02K 3/40, 3/30	A1	(11) International Publication Number: WO 00/60721 (43) International Publication Date: 12 October 2000 (12.10.00)
(2) International Application Number: PCT/GB00/01112 (22) International Filing Date: 31 March 2000 (31.03.00) (36) Priority Data: 9907527.7 1 April 1999 (01.04.99) GB (71) Applicant (for all designated States except US): ALSTOM UK LTD. [GB/GB]; Mill Road, P.O. Box 70, Rugby, Warwickshire CV21 1TB (GB). (72) Inventor; and (75) Inventor/Applicant (for US only): GLEW, Charles, Neville [GB/GB]; 4 Drayton Leys, Rugby, Warwickshire CV22 5RH (GB). (74) Agent: DARGAVEL, Laurence, Peter; Alstom UK Ltd., Mill Road, P.O. Box 70, Rugby, Warwickshire CV21 1TB (GB).	(81) Designated States: AU, CA, JP, KR, MX, NO, RU, US, ZA, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published With international search report. With amended claims.	

(54) Title: IMPROVEMENTS IN ELECTRICAL MACHINES



(57) Abstract

A composite conductor (30) comprises strands (31) of conductor material forming a conductor bundle (32) of generally rectangular shape; the strands being insulated from each other within the bundle. An insulating sleeve (36) of homogeneous polymeric material surrounds the conductor bundle (32); the insulating sleeve also having a rectangular shape. The polymeric material of the sleeve is filled with at least one insulating filler material which conducts heat more efficiently than the polymer alone, and a coating of conductive material (38) forms a corona shield on the inner and outer surfaces of the insulating sleeve. By virtue of its construction and the materials it uses, the composite conductor (30) provides a high efficiency winding (46) for the stator (40) of an electrical machine. The invention also includes a stator having a winding comprising the composite conductor and manufacturing methods for the composite conductor and the stator.